

Linux Port

- We need to start testing PA/SA
 - Our current pace -- be finished next May
 - We need to be done by the Jan 1
- According to Porting Team, we have 75 programs **ready to test**
 - Budlong is ready and willing to help debug/document problems
 - Some need to be coordinated with other depts
- Want to have daily 1-2hour session of testing with Jim
 - On-call?!?

What the Flux?!?!

- As Steve has pointed out -- we are not as good as Feb.
- What is needed to get back to 20mA/hr
- How to get to 25mA/hr by Nov
- Then how to get to 30mA/hr

*Meeting last week with
Dixon, McGinnis & Lebedev*

Get back to 20mA/hr

- Fix beam intensity on target
 - Other departments are working on this
 - Recent change from $<6e12$ to $>7e12$
- Fix Overthruster
 - 120GeV P1 BPM problem being worked upon
 - Will see if can run without P1
 - AP2 needs 120GeV part to be stable first
- Fix Deb Hor Band 1 tank
 - Dzero needs a 2 shift access by Aug 1
- Fix Stacktail
 - Not the same profile as before
 - Accumulator orbit

What has been Shown

- Slip Stacking (7%)
 - Feb. at 7.5×10^{12} on average
 - Design 8.0×10^{12} on average
- Lithium Lens (0 – 15%)
 - Lens Gradient from 760T/m to 1000 T/m
- AP2 Line (5-30%)
 - Energy Match
 - Lens Steering
 - AP2 Steer to apertures
 - AP2 Lattice
- Debuncher Aperture (13%)
 - Currently $30-32\pi$ mm-mrad
 - Design to 35π mm-mrad
- DRF1 Voltage (5%)
 - Currently running on old tubes at 4.0 MEV
 - Need to be at 5.3 MeV
- Accumulator and D/A Aperture (20%)
 - Acc Orbit/Lattice
 - Currently at 2.4 sec
 - Design to 2.0 sec
- Stacktail Efficiency
 - Can improve core 4-8 GHz bandwidth by a factor of 2
- Timeline Effects
 - SY120 eats 7% of the timeline

Out of our Control

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Already Done

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Next few months

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AP2 & Deb Orbit & such 1

- Steer to center of Lens
 - Semi-parasitic stacking study with 120GeV Overthruster
- Steer to center of first six AP2 quads
 - Semi-parasitic stacking study with 120GeV and lens set by Overthruster
- Steer to AP2 apertures (left and down bends)
 - Semi-parasitic stacking study to determine desired BPM positions
 - Also use reverse proton BPM positions from December studies

AP2 & Deb Orbit & such 2

- Energy Match
 - Deb cooling freq to be in center of arc quads & B-field set to Accumulator injection/extraction energy
 - Will need 53MHz Debuncher BPMs
 - Will need to reset cooling systems and bunch rotation frequencies
 - AP2 left bend to set to match Debuncher energy
- AP2 lattice
 - Believe understand quads/lattice downstream of Q706
 - First 6 quads known to ~10%
 - Lens known to ~25%
 - Beam phase space off of target known to ~15%
 - During stable running, will have to investigate 6D phase space to match from target into AP2-Debuncher

Further down the Line(?)

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Reverse Protons

- Set orbit through center of quads
- Optimize Apertures
- Investigate lattice
 - Improve injection channel (?)
- D/A line investigation
 - Would like D/A BPMs
- Investigate Accumulator Injection Channel and pbar injection
 - Loss Monitors

Icing

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